

WHAT IS CLAIMED IS:

1 1. A clamping mechanism for releasably interconnecting two
2 structural components having radially outwardly reaching
3 clamping surfaces of rotational symmetry, said clamping
4 mechanism comprising a plurality of clamping elements, at
5 least one tensioning member holding said clamping elements
6 together, said clamping elements comprising a radially
7 inwardly facing clamping groove adapted for cooperation
8 with said clamping surfaces of said structural components,
9 said at least one tensioning member comprising a first end
10 and a second end, a first connecting eye secured to said
11 first end of said at least one tensioning member, a second
12 connecting eye secured to said second end of said at least
13 one tensioning member, and at least one tensioning assembly
14 comprising a mounting, first and second tensioning levers
15 and two separate hinges, each separate hinge operatively
16 securing one of said first and second tensioning levers to
17 said mounting for tensioning said at least one tensioning
18 member, a locking mechanism secured to said mounting
19 between said first and second tensioning levers for locking
20 said first and second tensioning levers in a tensioned
21 position, said first tensioning lever comprising a first
22 guide, a first journal bolt securing said first connecting
23 eye to said first tensioning lever in said first guide for
24 movement relative to said first tensioning lever, said
25 second tensioning lever comprising a second guide, a second
26 journal bolt securing said second connecting eye to said
27 second tensioning lever in said second guide for movement

28 relative to said second tensioning lever, and retarding
29 means operatively interposed between said mounting and each
30 tensioning lever of said first and second tensioning levers
31 for slowing down an opening motion of said first and second
32 tensioning levers.

1 2. The clamping mechanism of claim 1, wherein said retarding
2 means comprise a spring elastic characteristic.

1 3. The clamping mechanism of claim 1, wherein said retarding
2 means comprise a least one leaf spring (34, 35) and a
3 spring support securing said at least one leaf spring to
4 said mounting, said at least one leaf spring extending into
5 an opening motion path of a respective tensioning lever of
6 said first and second tensioning levers.

1 4. The clamping mechanism of claim 3, wherein said spring
2 support comprises an open groove for said at least one leaf
3 spring and a removable cover for closing said open groove
4 with said at least one leaf spring held in said groove by
5 said removable cover.

1 5. The clamping mechanism of claim 4, comprising two leaf
2 springs having a length such that leaf spring ends protrude
3 from opposite sides of said spring support into positions
4 for contacting said spaced first and second tensioning
5 levers when said first and second tensioning levers perform
6 an opening motion.

1 6. The clamping mechanism of claim 5, wherein said leaf spring
2 ends protruding from opposite sides of said spring support
3 have an initial spacing (b) from said first and second
4 tensioning levers respectively so that said first and
5 second tensioning levers contact said leaf spring ends
6 after said first and second tensioning levers have been
7 released from their closed position and are moving toward
8 an open position.

1 7. The clamping mechanism of claim 3, comprising two leaf
2 springs for contacting each of said first and second
3 tensioning levers, and contact pins secured to said first
4 and second tensioning levers in positions for engaging said
5 two leaf springs when said tensioning levers are moving
6 toward an open position.

1 8. The clamping mechanism of claim 7, wherein said contact
2 pins are initially spaced from said leaf springs so that
3 said contact pins contact said leaf springs after said
4 first and second tensioning levers have been released from
5 their closed position.

1 9. The clamping mechanism of claim 7, wherein said two leaf
2 springs extend in parallel to each other and are spaced
3 from each other, and wherein said contact pins protrude
4 from opposite sides of said first and second tensioning
5 levers.

1 10. The clamping mechanism of claim 1, wherein said retarding
2 means comprise at least one spiral spring interposed
3 between each of said first and second tensioning levers and
4 said mounting.

1 11. The clamping mechanism of claim 10, wherein said at least
2 one spiral spring is interposed between said mounting and
3 a respective hinge pin of said two separate hinges.

1 12. The clamping mechanism of claim 11, wherein said at least
2 one spiral spring is a helical spring surrounding said
3 hinge pin, wherein one end of said helical spring is
4 secured to said hinge pin and another end of said helical
5 spring is secured to said mounting.

1 13. The clamping mechanism of claim 1, wherein each of said
2 first and second tensioning levers comprises a frame, each
3 of said two separate hinges comprising at least one hinge
4 block and a hinge pin hinging a first end of said frame to
5 said mounting, said frame forming a hollow guide as part of
6 said first and second guides, each tensioning lever further
7 comprising a guide block displaceable inside said hollow
8 guide, said frame having an internally threaded second end
9 opposite said first end, a clamping screw having an
10 external threading passing through said internal threading
11 of said second frame end, said clamping screw having an
12 inner end connected to said guide block carrying one of
13 said first and second journal bolts respectively, said
14 frame further having at least one elongated open side

15 channel through which said one of said first and second
16 journal bolts extends out of said frame into engagement
17 with said first and second connecting eyes of said at least
18 one tensioning member.

1 **14.** The clamping mechanism of claim 1, comprising two
2 tensioning members constructed as tensioning straps or
3 belts extending in parallel to each other.

1 **15.** The clamping mechanism of claim 1, comprising two
2 tensioning members, each of said two separate hinges
3 comprising a hinge pin having a journal axis extending in
4 parallel to a longitudinal central axis of said two
5 structural components and in a cylindrical circumferential
6 plane around said longitudinal central axis, said two
7 tensioning members also extending in said cylindrical
8 circumferential plane when said two tensioning members are
9 in their tensioning locked position.

1 **16.** The clamping mechanism of claim 1, wherein said at least
2 one tensioning member and said plurality of clamping
3 elements form an uninterrupted ring in a locked closed
4 state and in an unlocked open state of said clamping
5 mechanism.

1 **17.** The clamping mechanism of claim 1, further comprising a
2 snap lock secured to said mounting for holding a respective
3 tensioning lever of said first and second tensioning levers
4 in an open tension released position.

1 18. The clamping mechanism of claim 17, wherein said snap lock
2 comprises a shaped spring secured to said mounting, said
3 first and second tensioning levers comprising contact pins
4 which engage said retarding means when said tensioning
5 levers move from a tensioned locked position to a tension
6 released position, and wherein said contact pins engage
7 said snap lock when said tensioning levers have reached
8 said tension released position.